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| 10/582,264 | 05/21/2007 | David A. Waldman | APR-004US | 4793 |
| 24902 7590 10/14/2010 | | | | |
| KENNETH J. LUKACHER | | | | |
| SOUTH WINTON COURT | | | | |
| 3136 WINTON ROAD SOUTH, SUITE 301 | | | | |
| ROCHESTER, NY 14623 | | | | |
| EXAMINER | | | | |
| HUBER, PAUL W | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 2627 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/582,264

Applicant(s)

WALDMAN ET AL.

Examiner

Paul Huber

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-22, 25-36, 44, 46-73 and 75-78 is/are pending in the application.
- 4a) Of the above claim(s) 3, 11, 15, 16, 20, 28, 32, 33, 47, 57, 69, 73 and 77 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2, 4, 5, 8-10, 12-14, 17-19, 21, 22, 25-27, 29-31, 34, 46, 48-56, 58-64 and 71 is/are allowed.
- 6) ☒ Claim(s) 35, 36, 65, 66, 70, 72, 75 and 78 is/are rejected.
- 7) ☒ Claim(s) 44, 67, 68 and 76 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-692)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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Claim 44 is objected to as failing to provide clear antecedent basis for "said recording means".

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 35, 36, 65, 66, 70, 72, 75 and 78 are rejected under 35 U.S.C. 102(b) as being anticipated by Haskal (US 6,023,352).

Regarding claims 35 and 36, Haskal discloses an apparatus and system for fixing holographic data storage with a photosensitive holographic data storage media 12 having one or more locations of recorded holograms 14 representing data. See col. 1, lines 11-43, and figure 1. A fixing laser 16 directs optical energy through the media 12, which is redirected by reflective mirror 22 back into the media 12, to directly heat the holograms 14, and then a revelation laser 40 illuminates the holograms 14 that "excites electronic charges and washes away the electronic hologram revealing a more stable ionic hologram" (col. 5, lines 40-43). Thus, the apparatus includes means 16, 22, 40 for exposing the media 12 with sufficient energy to fix the media 12 against further recording in the one or more locations of recorded holograms 14 representing data. "Revelation laser 40 and the laser source initially forming the electronic hologram are the same..." (col. 5, lines 46-47). Thus, the exposing means 16, 22, 40 is operative by directing optical energy for recording to at least one of the one or more locations of the recorded holograms 14 representing data as claimed. See also, col. 24-48.

Regarding claims 65 and 66, Haskal discloses a system for holographic data storage on holographic data storage media 12. The system comprising: an optical source (revelation laser) 40; optics (element 40) for recording one or more holograms 14 representing data on media 12 (see col. 5, lines 46-47); an optics (elements 16, 40, 22) for fixing the media 12 from further recording where the one or more holograms 14 were recorded. A fixing laser 16 directs optical energy through the media 12, which is redirected by reflective mirror 22 back into the media 12, to directly heat the holograms 14, and then a revelation laser 40 illuminates the holograms 14 that "excites electronic charges and washes away the electronic hologram revealing a more stable ionic hologram" (col. 5, lines 40-43). . "Revelation laser 40 and the laser source initially forming the electronic hologram are the same..." (col. 5, lines 46-47). Thus, the optics for recording and the optics for fixing are operative using radiation from the same optical source as claimed. See also, col. 24-48.

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Regarding claims 70, 72, 75 and 78, Haskal discloses an apparatus utilizing holographic data storage. The apparatus comprising: a source 16 providing a beam; and optics (reflecting mirror) 22 for redirecting the beam that passes through the media 12 to one or more locations in the media 12 where one or more holograms 14 have been previously recorded. Haskal teaches that "the reflecting mirror can introduce a small offset angle in the retroreflected beam that prevents the retroreflected beam from reaching the fixing laser" (col. 5, lines 11-13). Therefore, because the optics (reflecting mirror) 22 introduces an offset angle in the retroreflected beam, the one or more locations in the media 12 are different from the location of the media 12 from which the beam passes out of the media 12 to the optics 22 as claimed.

Claims 1, 2, 4, 5, 8-10, 12-14, 17-19, 21, 22, 25-27, 29-31, 34, 46, 48-56, 58-64 and 71 are allowed.

Claims 44, 67, 68 and 76 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments with respect to claims 35, 36, 65 and 66 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 70, 72 and 75, Applicant's arguments filed July 15, 2010 have been fully considered but they are not persuasive. The applicant argues that in Haskal, "Its optics (22) does not direct light (noted as light rays 26) to any location different from the location from which the beam passes out of element (12)." The examiner respectfully disagrees. As described in the rejection above, Haskal teaches that "the reflecting mirror can introduce a small offset angle in the retroreflected beam that prevents the retroreflected beam from reaching the fixing laser" (col. 5, lines 11-13). Therefore, because the optics (reflecting mirror) 22 introduces an offset angle in the retroreflected beam, the one or more locations in the media 12 are different from the location of the media 12 from which the beam passes out of the media 12 to the optics 22 as claimed. Accordingly, the rejection as applied is deemed correct and is maintained.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Paul Huber at telephone number 571-272-7588.

/Paul Huber/
Primary Examiner, Art Unit 2627

pwh
October 11, 2010